4. Troubleshooting

4-1 Troubleshooting

4-1-1 First Checklist for Troubleshooting

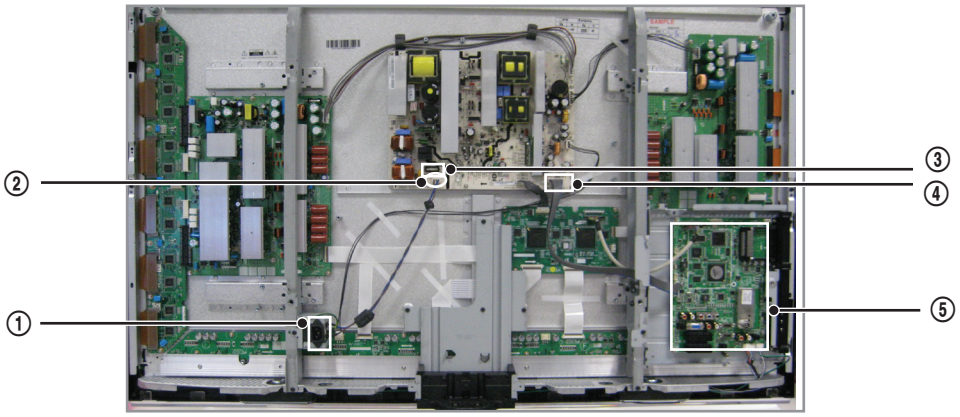
1. Check the various cable connections first.
   - Check to see if there is a burnt or damaged cable.
   - Check to see if there is a disconnected or loose cable connection.
   - Check to see if the cables are connected according to the connection diagram.

2. Check the power input to the Main Board.

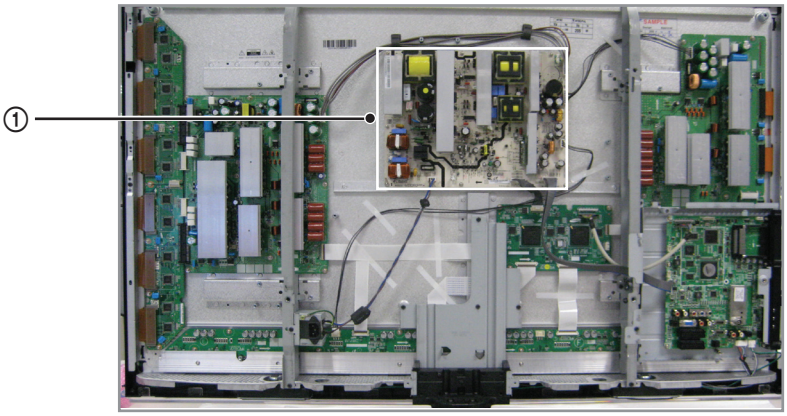
3. Check the voltage in and out between the SMPS ↔ Main Board, between the SMPS ↔ X, Y Main Board, and between the Logic Boards.

4-1-2 Checkpoints by Error Mode

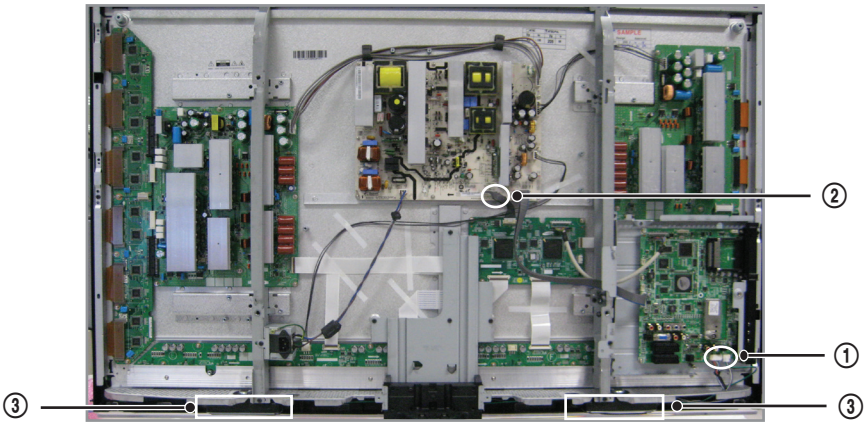
■ No Power

Symptom	- The LEDs on the front panel do not work when connecting the power cord. - The SMPS relay does not work when connecting the power cord. - The unit appears to be dead.
Major Checklist	The SMPS relay or the LEDs on the front panel does not work when connecting the power cord if the cables are improperly connected or the Main Board or SMPS is not functioning. In this case, check the following: - Check the internal cable connection. - Check the fuses. - Check the output voltages of the SMPS. - Replace the Main Board.
Troubleshooting Procedures	 ① Check that the AC power cord is connected — No → Connect the AC power cord Yes If LED is set up as being ON when POWER-ON, check the ligt-on in LED — No → Replace Fuse (FE801) Yes ② Is the AC Inlet socket connected? — No → Connect AC Inlet socket Yes ③ Check the connection between Fuse FE801 for checking SMPS's Fuse — No → Replace Fuse Yes ④ Check the No. 4 STAND-BY power of CN801 — No → Replace the SMPS Yes ⑤ Replace the Main Board

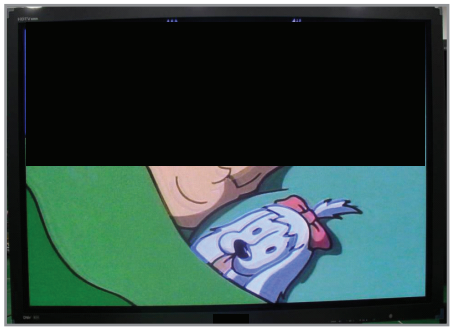
■ When the unit is repeatedly turning on and off

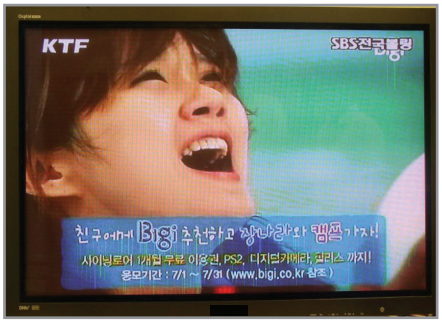
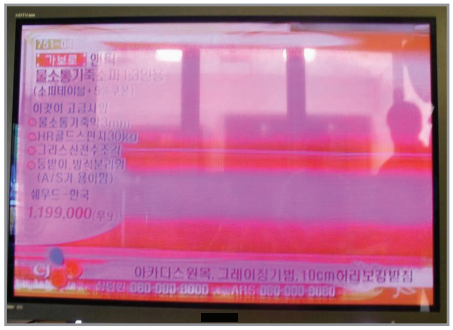
Symptom	- The SMPS relay is repeatedly turning on and off.
Major Checklist	In general, the SMPS relay repeatedly turns on and off by the protection function due to a defect on a board connected to the SMPS. - Disconnect all cables from the SMPS, operate the SMPS alone and check if the SMPS works properly and if each voltage output is correct. - If the symptom continues even when SMPS is operated alone, replace the SMPS. - If the symptom is not observed when operating the SMPS alone, find any defective assemblies by connecting the cables one by one.
Troubleshooting Procedures	 ① Check that the Va,Vs voltage of SMPS match the voltages marked on the module label → No → Replace the SMPS Yes ↓ Did problem improve? → No → Replace the Main Board Yes ↓ Did problem improve? → No → Replace the Y Main Board Yes ↓ Did problem improve? → No → Replace the X Main Board Yes ↓ Did problem improve? → No → Replace the Logic Board Yes ↓ Did problem improve? → No → Replace the X, Y Buffer Board
Caution	When separating and connecting the cables such as CN800, CN802, CN803, CN804 of the Main SMPS, U4004 of the X Main Board, and CN5005 of the Y Main Board, a spark may be generated by the electric charge of the high capacity capacitor. Therefore, wait some time after disconnecting the power cord from the unit.

■ No Sound

Symptom	- Video is normal but there is no sound.
Major Checklist	- When the speaker connectors are disconnected or damaged. - When the sound processing part of the Main Board is not functioning. - Speaker defect.
Troubleshooting Procedures	 ① Is the cable connection between the Main Board and the speaker properly connected? — No → Cable Connection Yes ② Check that the voltage of No.7,8 pin of SMPS CN801 has 18V — No → Replace the SMPS Yes Is the speaker output terminal of the Main Board normal? — No → Replace the Main Board Yes ③ Replace the Speaker

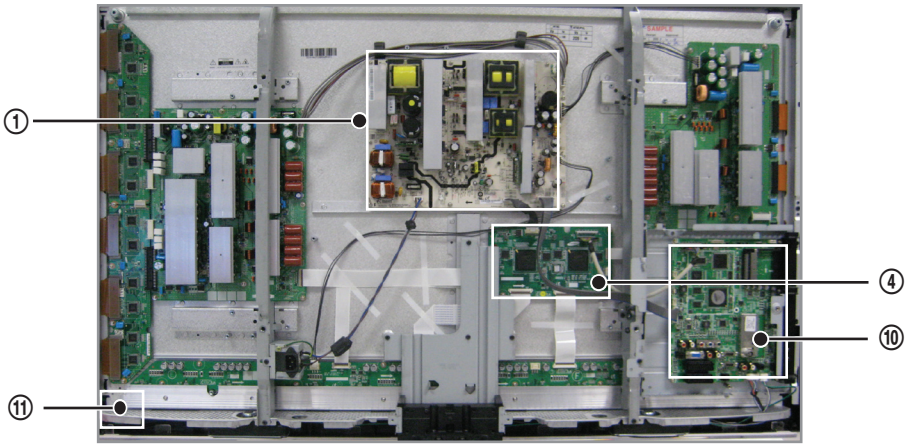
4-1-3 Faults and Corrective Actions

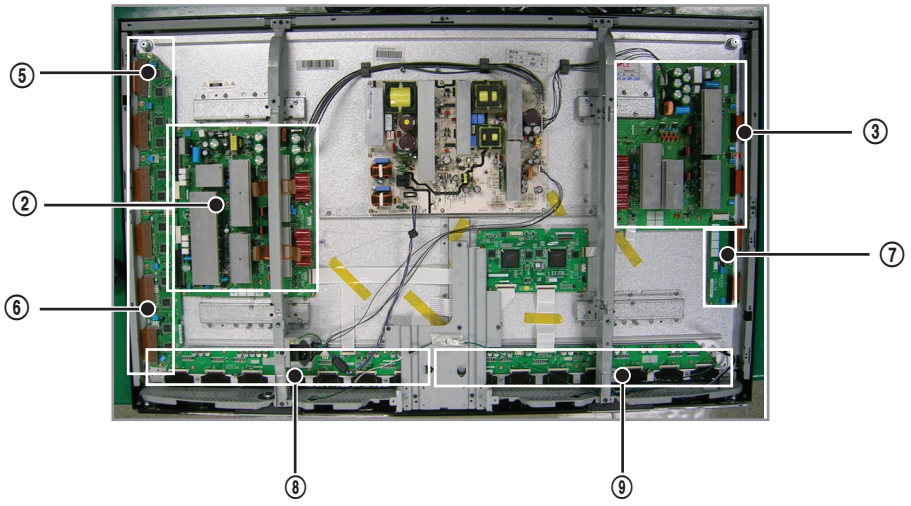
Symptom	Related Image	Causes and Countermeasures
A blank vertical cell (block) appears on the screen.		Address buffer defect - Replace the corresponding address buffers(E or F) COF defect (burnt) - Replace the module
A green screen appears when the TV is turned on.		The Scale is not reseting - Replace the Main board
The OSD box appears but there is no text.		Incorrect program version - Check the version of each program - Replace the Main board
A blank upper (or lower) block appears on the screen.		Upper/Lower Y Buffer defect - Replace the corresponding ·lower buffers

Symptom	Related Image	Causes and Countermeasures
Either the main or sub picture does not appear.		Replace the Main board
A vertical green line appears on the screen.		The SMPS voltage is incorrect - Adjust the SMPS voltage according to the voltage printed on the module label
Dim screen (blurred in red)		X-Main board defect - Replace the X-Main board
A blank screen appears		- Replace the Y-Main board

4-1-4 Troubleshooting Procedures by assembly

No	Assembly	Major Symptoms
1	SMPS-PDP TV	No power, Blank screen, the Relay repeats On and Off
2	ASSY PDP MODULE P-Y MAIN	Blank screen
3	ASSY PDP MODULE P-X MAIN	Blank screen
4	ASSY PDP MODULE P-LOGIC MAIN	Blank screen, Screen noise
5	ASSY PDP MODULE P-Y-MAIN SCAN UPPER	Upper screen is blank
6	ASSY PDP MODULE P-Y MAIN SCAN LOWER	Lower screen is blank
7	ASSY PDP MODULE P-X-MAIN BUFFER BORAD	Corresponding Buffer Board block screen is blank
8	ASSY PDP MODULE P-ADDRESS E BUFFER	Corresponding Buffer Board block screen is blank
9	ASSY PDP MODULE P-ADDRESS F BUFFER	Corresponding Buffer Board block screen is blank
10	ASSY PCB MISC-MAIN	No Power, Abnormal screen for each input source, PIP screen trouble, Sound trouble
11	ASSY BOARD P-FUNCTION & IR	The side function key does not work properly. The remote control does not work properly, the LED does not work properly.





4-2 Adjustment

4-2-1 Service Instruction

■ Before Performing After Sales Services

1. Check if the measurement and test equipment is working properly.
2. Secure sufficient work space for disassembling the product.
3. Prepare a soft pad for disassembling the product.

■ Service adjustment item after replacement of Board

<If adjustment equipment is available>

① PDP Option of Factory Mode → set the Factory Data Type item as the suitable value of relevant model.
② Adjust Calibration of Factory Mode for each mode.
③ Adjust White Balance of Factory Mode.

<If adjustment equipment is not available>

① Write down the value of HDMI White Balance of Factory Mode before replacing Board.
② PDP Option of Factory Mode → set the Factory Data Type item as the suitable value of relevant model.
③ Set the value of HDMI White Balance with the value written down before.

4-2-2 How to Access Service Mode

1. General Remote

   To Enter: **POWER OFF** → **INFO** → **MENU** → **MUTE** → **POWER ON**

   (Interval between key strokes: less than 3 sec)

   To Exit: **POWER OFF** → **POWER ON**

2. Factory Remote

   To Enter: **POWER ON** → **INFO** → **Factory Key** (Interval between key strokes: less than 3 sec)

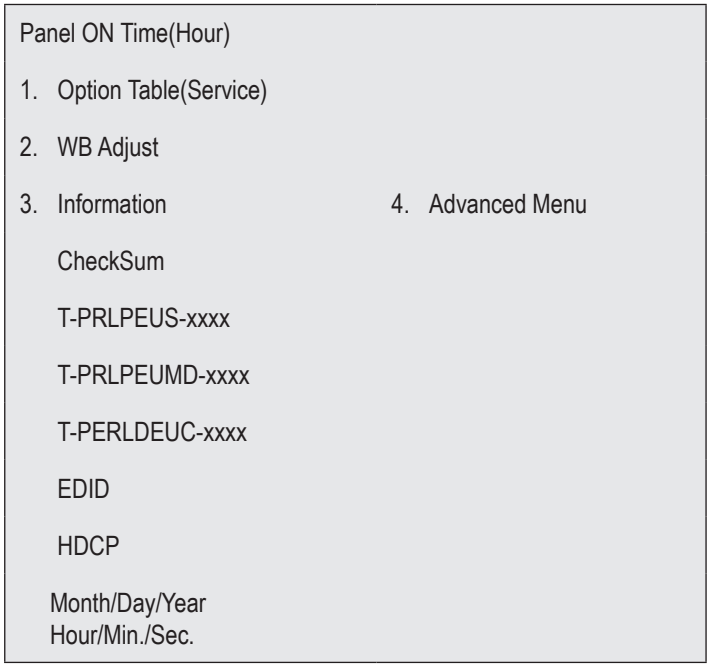
   To Exit: **POWER OFF** → **POWER ON**

   Press the Factory key twice with a key stroke interval of more than 1 second (Pressing once enters Aging Mode)

3. Settings when entering Factory mode
   - Sharp Screen (Dynamic), Color Tone (Cool1), Factory (Dynamic CE Off)

4. Adjustment Procedures
   - Channel ▲▼ Key: Select an item.
   - Volume ◀▶ Key: Adjust the value up or down.
   - MENU Key : Save the changes to the EEPROM and return to the higher-level mode.
   - Using the Numeric (0~9) keys, you can select a channel.
   - Using the SOURCE key, you can switch AV modes.

5. Initial SERVICE MODE DISPLAY State



※ The version of the firmware displayed at the bottom of the screen may differ and the firmware is subject to change for the improvement of product functions.

※ If you have adjusted the settings in Service Mode, you have to reset the product.

4-2-3 Factory Data

♦ The underlined are items applied during the service adjustment. None of the others should be adjusted.

1. Option
2. Calibration
3. WB
4. CHECKSUM
5. Advanced
6. Font Data Viewer

T-AMBDFRC-xxxx (Application S/W Ver.)
T-AMBDEUM xxxx (Scaler S/W Ver.)
T-AMBDEUS-xxxx (Sub micom Ver.)
Not Display
xxxx xxxx xxxx xxxx xxxx xxxx xx
Year-Month-Day
EDID : Success/Failure
DTP-LM-xxxx
Date of Purchase : Month/Day/Year

1. Option

Item	Range
Factory Reset	
Wb Reset	
Panel Inch	37”, 40”
Dimm Type	EXT, INT, INT_NEG, EXT_POS, EXT_NEG
Panel Type	40AMSC100F,46AMSC100F,52AMSC100F,32AMAG50F,32AUAG50F,37AUAG50F,40AMAG50F, 40AUAG50F,40CMAG50F,46AMAG50F,46AUAG50F,46CMAG50F,52AMAG50F,52CMAG50F,26AMAG5 0,26AUAG50,26CMNG50,32AUAG50,32AUNG50,32CMNG50,32CMAG50,37AUAG50,37CPAG50,40A UAG50,40AMAG50,32AMAG50,32AM8AG50,32AMSC50F,37AUSC50F,37AUSC100F
Language	0~10
D-Gamma	OFF/0.85/0.88/0.90/0.93/0.95/0.98
Anynet+	ON/OFF
Light Effect	ON/OFF
WM Calib	ON/OFF
Auto Power	ON/OFF
LNA Menu	ON/OFF
VOL Table	EU/Non EU
Shop Mode	ON/OFF
Color Space	ON/OFF
PC Ident	Auto/Enable
Country	0~7
Lvds Tx Fmt	JEDIA/VESA/PDP
Lvds Tx Bit	8/10/12 bit
Init Color System	PAL_M/PAL_N/NT358/AUTO
BUS STOP	ON/OFF
Manual Store	ON/OFF
Panel Time	2/0 Hour
Number of HDMI	3
Visual TEST	Enable/Disable
Carrier Mute	ON/OFF
High Devi.	ON/OFF
Tuner Sel	AUTO/ALPS/ALPS_SL/SEMCO/SEMCO_SL
LNA On/Off	Auto/on/off
Armani TV	ON/OFF
Mosel Sel	L450/L550_P1/L550_P2/L550_P3/L550_P4/L650/P410/P450/P470/P550
PixelShift Test	ON/OFF
Hotplug	ON/OFF
HDMI Clk Ctrl	ON/OFF
Hotplug Delay	3~50

2. Calbration

Item	Range
AV Calibration	Init / Success / Failure
DTV Calibration	Init / Success / Failure
PC Calibration	Init / Success / Failure
HDMI Calibration	Init / Success / Failure

3. WB

Item	Range	Data
Sub Brightness	0~255	128
R Offset	0~255	128
G Offset	0~255	128
B Offset	0~255	128
Sub Contrast	0~255	140
R Gain	0~255	128
G Gain	0~255	128
B Gain	0~255	128

4. CHECKSUM 0xXXXX

5. Advanced

1) FRCM

Item	Range	Data
FW Version	0~255	134
EEPROM State	0~255	134
SS On/Off	ON/OFF	ON
SS Width [%]	0~30	20
SS Freq [KHz]	0~70	60
PATT_Before DDR	0~9	0
PATT_After DDR	0~7	0
FMD_DEMO	ON/OFF	OFF
Video_Judder_Low	0~32	0
Video_Judder_Med	0~32	0
Video_Judder_High	0~32	0
Film Low SD 22	0~32	13
Film Low SD 32	0~32	13
Film Medi SD 22	0~32	8
Film Medi SD 32	0~32	10
Film High SD 22	0~32	3
Film High SD 32	0~32	5
Film Low HD 22	0~32	13
Film Low HD 32	0~32	13
Film Medi HD 22	0~32	8
Film Medi HD 32	0~32	10
Film High HD 22	0~32	3
Film High HD 32	0~32	5

2) Dynamic Contrast

Item	Range
Dynamic Contrast	ON/OFF
Dynamic Dimming	ON/OFF

3) LNA PLUS

4) Sound

Item	Range	Data
AM Mute TH_High	0~20	134
AM Mute TH_Low	0~20	134
FM Mute TH_High	0~96	ON
FM Mute TH_Low	0~96	20
Correct Threshold	1~7	60
Sync Loop	1~1000	0
Error Threshold	2~40	0
Parity Error Thrd	1~128	OFF
Every Num Frames		0
Num of Check	1~60	0
Num of Double Chk	5~50	0
Mono Weight	1~20	13
Stereo Weight	1~20	13
Dual Weight	1~20	8
M2S Threshold	1~20	10
S2M Threshold	1~20	3
NICAM Fine Vol	1~40	5
AM Fine Vol	1~40	13
Fine Tune Vol	1~40	13
SC1 Fine Vol	1~40	8
SC2 Fine Vol	1~40	10
Output Matrix	0~2	3
AMP Master Vol	0~48	5
AMP PWM Mode	254	254
DRC Threshold	0~127	18
Speaker EQ	ON/OFF	ON
Audio Delay	0~100	95
Game Audio Delay	0~60	60
Speaker Type	Side/Bottom	Side

5) Picture Enhance

Item	Range	Data
Low Gain	0~255	85
Middle Gain	0~255	90
High Gain	0~255	90
Local Low	0~255	90
Local Middlde	0~255	90
Local High	0~255	90
Gain1	0~255	10
Gain2	0~255	10
Gain3	0~255	10
Gain4	0~255	10
Gain5	0~255	10
Gain6	0~255	10
Gain7	0~255	5
Gain8	0~255	4
Limit Pos All	0~255	64
Limit Neg All	0~255	64
LTI_Gain	0~255	2
ECTI_Gain	0~255	2
SCTI_Cgain	0~255	2
SCTI_Fgain	0~255	20
Color_mid_value	0~255	160
Clip Th	0~255	40

6) YC Delay

Item	Range	Data
RF PAL-B/G	0~10	6
RF PAL-D/K	0~10	5
RF PAL-I	0~10	5
RF PAL-L/L	0~10	5
RF SECAM-B/G	0~10	7
RF SECAM-D/K	0~10	5
RF SECAM-I	0~10	5
RF SECAM-L/L	0~10	0
RF LTSC 3.58	0~10	5
RF LTSC 4.43	0~10	6
AV PAL	0~10	6
AV SECAM	0~10	6
AV NTSC3.58	0~10	6
AV NTSC4.43	0~10	6
AV PAL60	0~10	5

7) Calibration Target

Item	Range	Data
AV Offset	0~255	16
AV Delta	0~255	3
AV Gain	0~255	220
Y Offset	0~255	16
Y Delta	0~255	1
Y Gain	0~255	235
PC Offset	0~255	2
PC Delta	0~255	1
PC Gain	0~255	253
2nd_Offset	0~255	2
2nd_Delta	0~255	3
2nd_Gain	0~255	235

8) Calibration Adjust

Item	Range	Data
R_Offset	0~128	3
G_Offset	0~128	10
B_Offset	0~128	5
R_Gain	0~128	167
G_Gain	0~128	196
B_Gain	0~128	197
Y_Offset	0~128	10
Cb_Offset	0~128	5
Cr_Offset	0~128	3
Y_Gain	0~128	196
Cb_Gain	0~128	197
Cr_Gain	0~128	167
CVBS_Offset	0~128	87
CVBS_Gain	0~128	83
Red_Offset	0~128	112
Green_Offset	0~128	112
Blue_Offset	0~128	112
Red_Gain	0~128	164
Green_Gain	0~128	164
Blue_Gain	0~128	164

9) Movie WB

Item	Range	Data
Movie On/Off	ON/OFF	OFF
Picture Mode	Movie,Dynamic,Standard	Movie
Color Tone	NORMAL,WARM1,WARM2,COOL2,COOL1	COOL1
Msub Contr	0~255	128
Msub Brigh	0~255	128
Cool2_R_GAIN	0~255	126
Cool2_B_GAIN	0~255	154
Cool2_R_OFFSET	0~255	127
Cool2_B_OFFSET	0~255	126
Normal_R_GAIN	0~255	139
Normal_B_GAIN	0~255	90
Normal_R_OFFSET	0~255	124
Normal_B_OFFSET	0~255	129
Warm1_R_GAIN	0~255	155
Warm1_B_GAIN	0~255	42
Warm1_R_OFFSET	0~255	125
Warm1_B_OFFSET	0~255	139
Warm2_R_GAIN	0~255	170
Warm2_B_GAIN	0~255	6
Warm2_R_OFFSET	0~255	126
Warm2_B_OFFSET	0~255	150
Movie Contr	0~100	100
Movie Brigh	0~100	45
Movie Color	0~100	55
Movie Sharp	0~100	75
Movie Tint	0~100	50
Movie Backlight	0~10	10
Movie Gamma	OFF,0.85,0.88,0.90,0.93,0.95,0.98,M1,M2,M3	OFF

10) EPA Standard

Item	Range	Data
S.Contrast	0~100	95
S.Brightness	0~100	45
S.Sharpness	0~100	20
S.Color	0~100	50
S.Tint	0~100	50
S.Color Tone		2
S.Backlight	0~10	7

11) FBE

Item	Range	Data
Patt Sel		0
B Slope Gain	0~255	50
B Tilt Min	0~255	40
B Tilt Max	0~255	120
L func Basis	0~255	70
H func Basis	0~255	70
Mean Offset1	0~255	30
Mean Offset2	0~255	235
Mean Slope	0~255	112
ACR Offset	0~255	10
ACR Th1	0~255	20
ACR Th2	0~255	120
Skin Enable	ON/OFF	ON
Skin UV	0~255	135
M Skin UV	0~255	125
Sub Color	0~255	128
M Sub Color	0~255	118

12) Adjust

Item	Range	Data
Video Mute Time	0~10	6
Dynamic Dimming	ON/OFF	ON
Dynamic CE	ON/OFF	ON
LNA PLUS	ON/OFF	OFF
Magazine LNA	ON/OFF	OFF
Watchdog	ON/OFF	ON
UART Select	W.Mount,Sti,MTK,PDP Logic	W.Mount
?????		

13) Spread Spectrum

Item	Range	Data
Spectrum On/Off	ON/OFF	OFF
Step RF	0~255	30
Range RF	0~256	30
Step 480p/576p	0~257	30
Range 480p/576p	0~258	30
Step Comp	0~259	30
Range Comp	0~260	30
Step HDMI/DTV	0~261	30
Range HDMI/DTV	0~262	30
Step PC	0~263	30
Range PC	0~264	30
FBE Spectrum	0~4	0
FBE Range	0~15	15

14) Hotel Option

Item	Range	Data
Hotel Mode	ON/OFF	OFF
Power On Channel	0~99	1
Power On Volumel	0~100	10
Max Volume	0~100	100
Local Key Lock	0~2	0
Power On Source	ATV,Ext.1,Ext.2,AV,S-Video,Component, PC,HDMI1,HDMI2,HDMI3,HDMI4	ATV

15) EDID Control

Item	Range	Data
EDID On/Off	ON/OFF	OFF
EDID Type		13_1920_1080
EDID Write	Success/Failure	ON

16) Tuner Status

Item	Range	Data
SNR		0
BER		10
Signal Strenth		0
Frequency		41.00 MHz
LNA Status		OFF
Bandwidth		8 MHz
FFT		2k
Modulation		64QAM
Code Rate		2008-01-02
GI		1/32
Hier Modulation		Non-Hier
Frequancy Offset		0.000 KHz
Timing Offset		0.00 ppm
AGC		18648
UCB		0
PLL Type		TDA6651
DEMOD Type		S5H1432
TPS Lock		UNLOCK
RS Lock		UNLOCK

6. Font Data Viewer

4-2-4 Service Adjustment

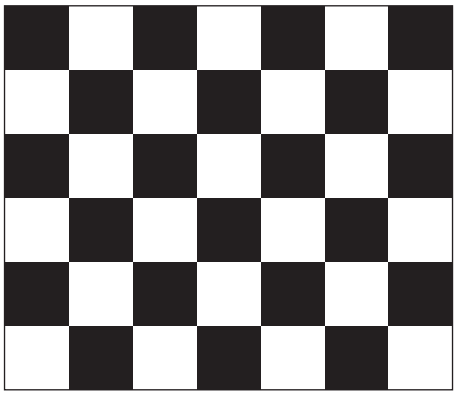
■ White Balance - Calibration

If picture color is wrong, do calibration first.

Execute calibration in Factory Mode

1. Source : VIDEO
2. Setting Mode : PAL Video (MODE: #2)
3. Pattern : Pattern #24 (Chess Pattern)
4. Use Equipment : K-7256 or Equipment of equality level
5. Work order
   ① Enter by Factory Mode select "2. WB Adjust".
   ② Select “CALIBRATION”.
   ③ Select “AV CALIBRATION” again in CALIBRATION MENU.
   ④ After Completing Calibration, come out “Av success”. OSD on the screen (bottom-side) for about 3 seconds.

Source AV : PAL composite, Component (DTV), HDMI: 1280*720/60Hz
PC : 1024*768/60Hz

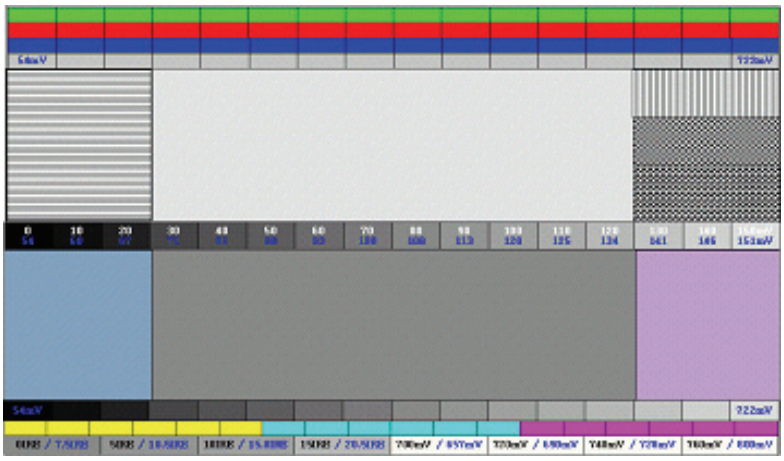


< Chess Pattern >

■ White Balance

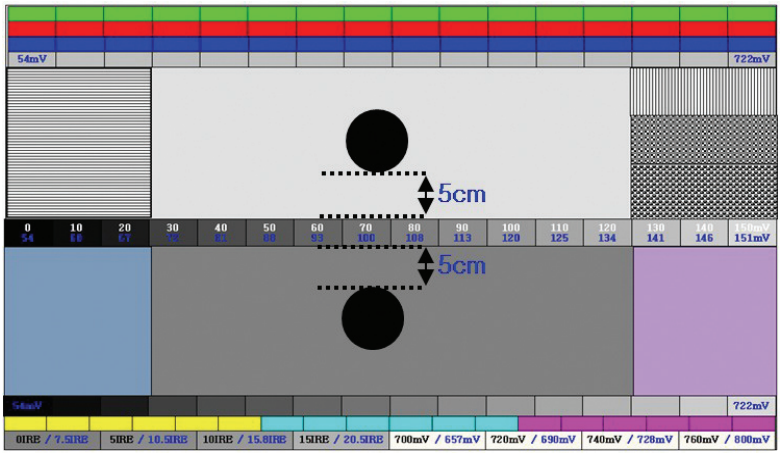
Adjust spec.

1. Source : HDMI
2. Setting Mode : 1280*720@60Hz
3. Pattern : Pattern #92
4. Use Equipment : MIK-7256 (MSPG925L)



< SAMSUNG WHITE BALANCE Adjustment PATTERN with FPD >

5. Work order
   ① Connect HDMI (DVI) output terminal of MIK-7256 (MSPG925L) to the HDMI input in main set
   ② Set the input to HDMI mode
   ③ Enter the White Balance menu of service mode
   ④ Contact CA-210 sensor to glass filter



< Fixed Position of CA210 Probe >

   ⑤ Adjust the low light
      - Adjust Sub-Bright (LBE) to set the 'Y' value
      - Adjust R-Offset ('x') and B-Offset ('y') to the color coordinates.
      * Do not adjust G-Offset data
   ⑥ Adjust the high light
      - Adjust Sub-Contrast (LBE) to set the 'Y' value
      - Adjust R-Gain ('x') and B-Gain ('y') to the color coordinates.
      * Do not adjust the G-gain data

Input mode		PS50A556S2F			
		x	y	Y(L)	T(K), MPCD
CVBS (PAL)	H/L	278±3	285± 3	Don't adjust	10500K/±0
	L/L	278± 5	285± 5	1.2±0.1	10500K/±0
COMP (720P)	H/L	278± 3	285± 3	Don't adjust	10500K/±0
	L/L	278± 5	285± 5	1.1±0.1	10500K/±0
HDMI (720P)	H/L	278± 3	285± 3	Don't adjust	10500K/±0
	L/L	278± 5	285± 5	1.2±0.1	10500K/±0

4-2-5 Replacements & Calibration

* Check items listed after changing each

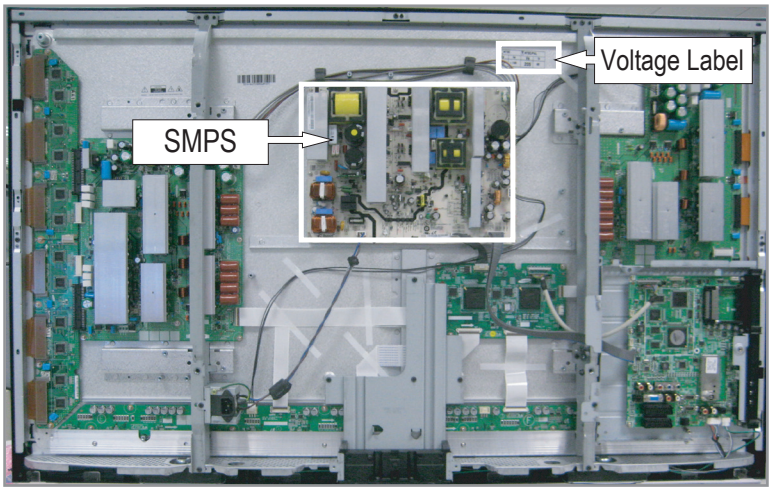
No	Replaced assembly items	Check Items
1	ASSY PCB MISC-MAIN	① Auto Program ② White Balance Adjust
2	SMPS-PDP TV	Vs, Va voltage check and adjust
3	ASSY PDP MODULE P-X MAIN	Not to be adjusted
4	ASSY PDP MODULE P-Y MAIN	
5	ASSY PDP MODULE P-LOGIC MAIN	
6	ASSY PDP MODULE P-Y-MAIN SCAN UPPER	
7	ASSY PDP MODULE P-Y MAIN SCAN LOWER	
8	ASSY PDP MODULE P-X-MAIN BUFFER BORAD	
9	ASSY PDP MODULE P-ADDRESS E-BUFFER	
10	ASSY PDP MODULE P-ADDRESS F-BUFFER	
11	ASSY BOARD P-FUNCTION&IR	

※ When replacing the SMPS or PDP panel, you have to check the voltage printed on the panel sticker and adjust it.

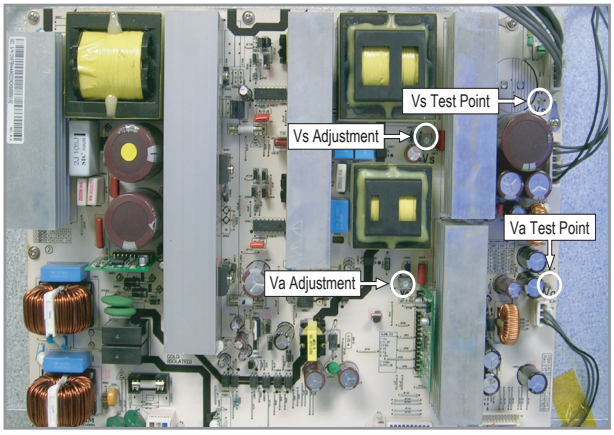
■ Voltage Adjustment

1. After replacing the SMPS or PDP panel, you must adjust the voltage referring to the voltage label printed on the panel. (If you do not adjust the voltage, an abnormal discharge symptom may appear.)

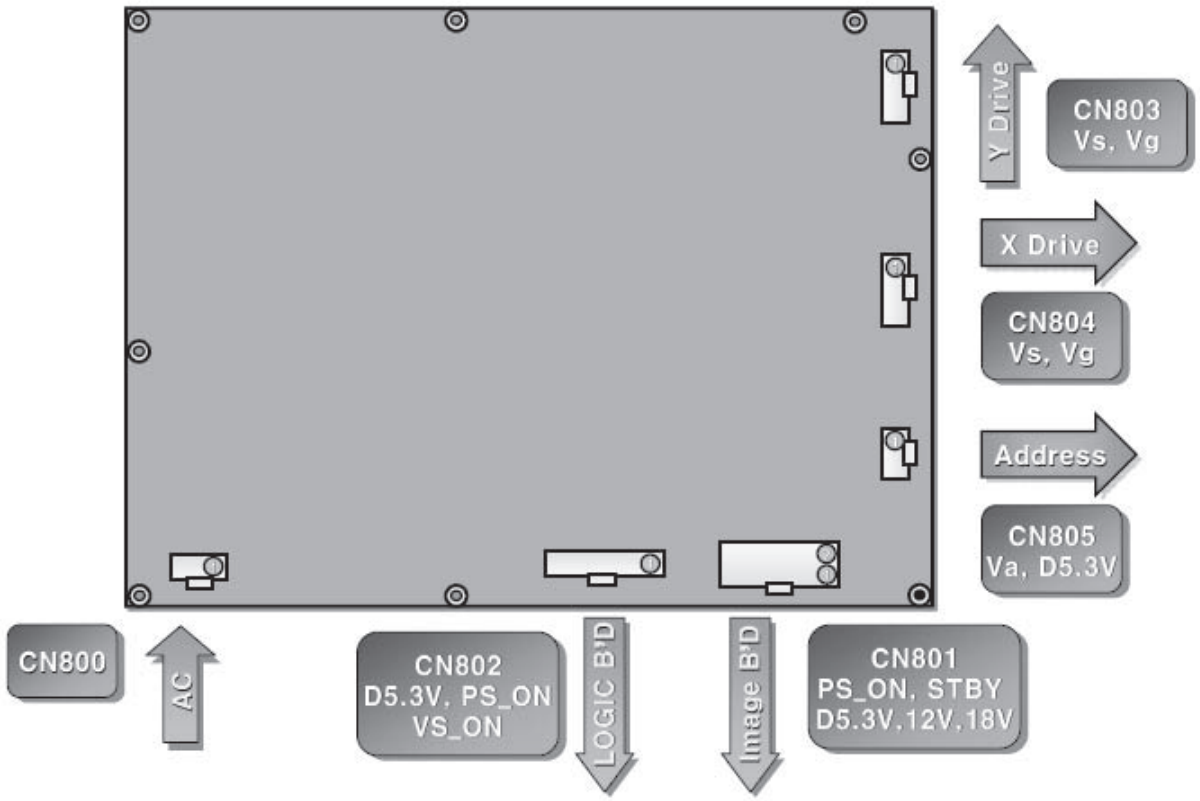
	Value	Board Adjustment
Vs	202	SMPS
Va	57	
Vset	-	
Ve	95	
Vsc	-190	



2. A point of adjusting SMPS-MAIN voltage.



■ SMPS Output Voltag



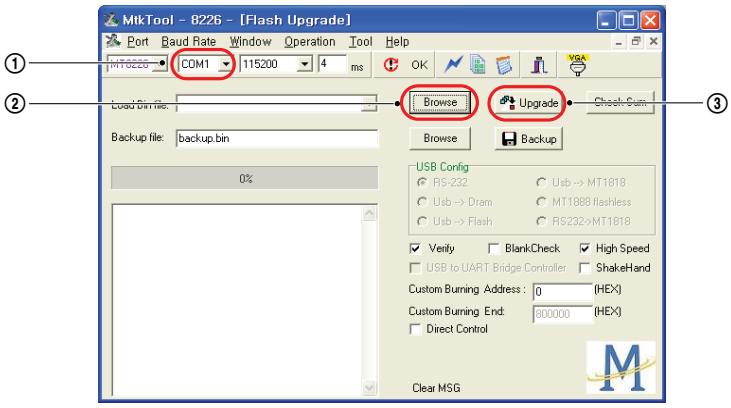
		Output Voltage		Output Current				Regulation	Protection (shutdown)			Ripple & Noise
		Min	Max	Min	Typ	Max	Peak		OVP	OCP	UVP	
1	VS	195V	210V	OA	2.2A	3A	15A	±1.5%	230V ↑	3.7A ↑	160V ↓	8V p-p (@15Ap)
2	VA	50V	60V	OA	1A	3A	10A	±1.5%	72V ↑	4.5A ↑	45V ↓	5V p-p (@10Ap)
3	VG	15V FIX		OA	0.5A	1A	1.5A	±5%	16V ↑	1.2A ↑	13V ↓	120mV p-p
4	5.3V	5.3V FIX		OA	7A	9A	12A	±3%	7V ↑	10A ↑	3.6V ↓	100mV p-p
6	12V	12V FIX		OA	1.5A	2.5A	3.5A	±5%	13V ↑	5A ↑	11V ↓	120mV p-p
7	VAMP	18V FIX		OA	0.5A	2.5A	3A	±5%	20V ↑	5A ↑	0.3V ↓	180mV p-p
8	STBY	5.2V FIX		OA	0.5A	1A	1.5A	±3%	6V ↑	5A ↑	-	100mV p-p

4-3 Upgrade

4-3-1 How to Update Main Program (with RS-232C Cable)

1. Connect Set (Service Jack) and RS-232C Cable to execute Program Update.

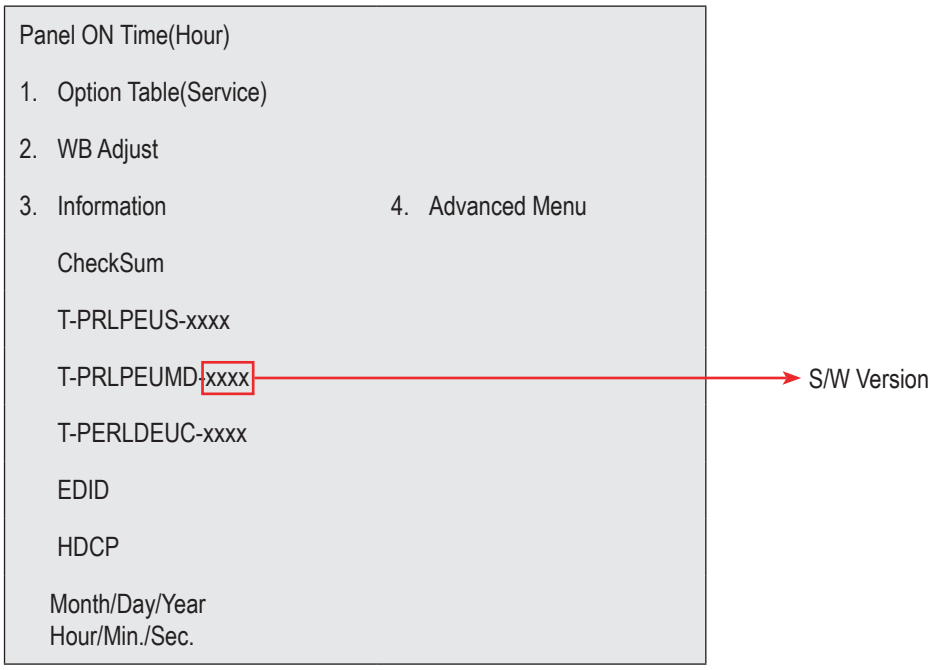
2. Turn Off (On Stand by mode) the Set
   - Run Download tool
   (1) Check port settings ①
   (2) Select BIN file by Browse ②
   (3) Turn On the Set
   (5) Click Upgrade Button ③



3. Turn off (= AC Power off) the Set (waiting a few seconds) and turn on again. S/W Down Load Time: 6min

4-3-2 How to Check the Version of the Program

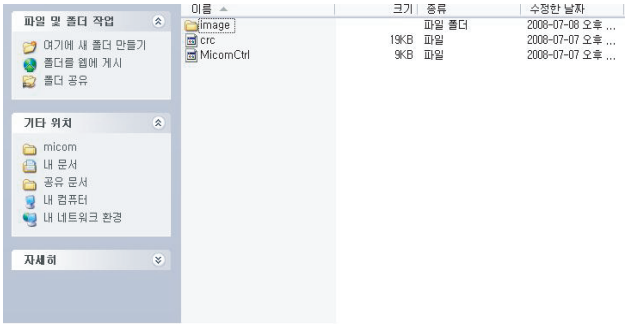
1. Procedures for checking in the Factory Menu.
   When entering Factory Mode, the version of the software is displayed at the bottom of the menu as described on page 4-9.

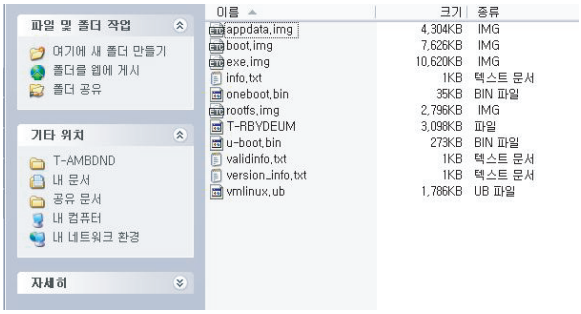


4-3-3 USB Download Method

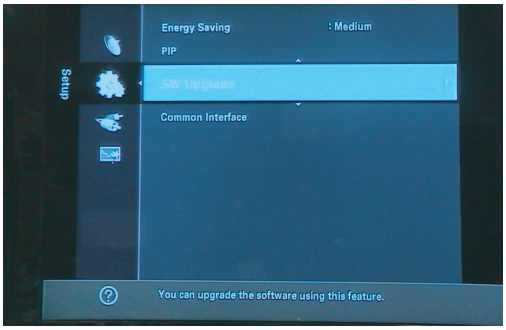
※ Samsung may offer upgrades for TV's firmware in the future. Please contact the Samsung call center at 1-800-SAMSUNG (7267864) to receive information about downloading upgrades and using a USB drive. Upgrades will be possible by connecting a USB drive to the USB port located on located on the back of your TV.

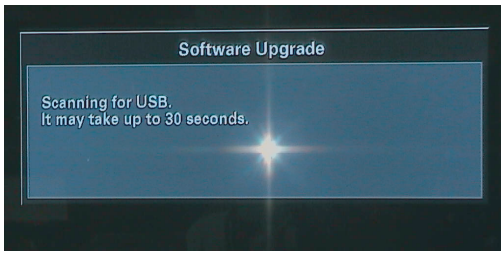
1. Insert a USB drive containing the firmware upgrade into the wiselink port on the side of the TV.
   (USB drive make folder "T-AMBDFR" and this folder download micom program.)





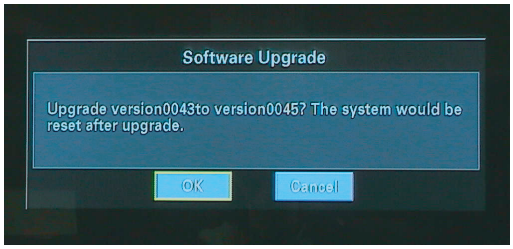
2. Insert USB drive.
   Menu → Setup → SW Update then press the ENTER button.
   The message “Scanning for USB.
   It may take up to 30 seconds.” Please be careful to not disconnect the power or remove the USB drive while upgrade is being applied.
   The message “Upgrade version XXXX to version XXXX ?
   The system would be reset after upgrade.”
   Press the left, right button to select “OK”.
   The TV will shut off after completing the firmware upgrade. Please check the firmware version after the upgrade is complete.

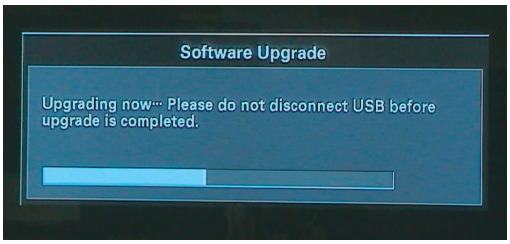




※ How to check Program Version

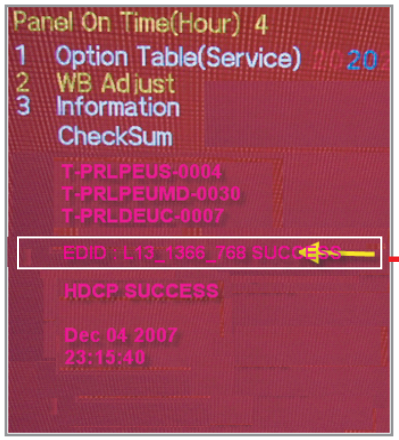
1. To enter Factory mode
2. Check the micom version
   T-AMBDND-xxxx





4-3-4 EDID Self-Write Method

1. OSD in case of entering Factory : It's displayed to check if Self write runs normally.



L13_1366_768 SUCCESS

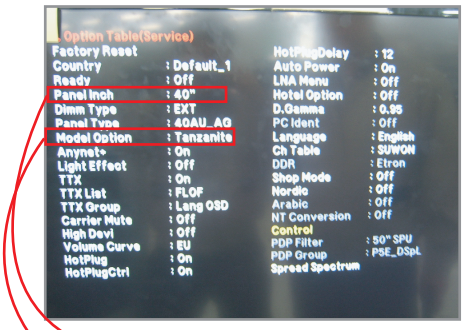
- PANEL highest resolution
- Success : Self write all port success / Failure : Even Self write one port failure
- HDMI Version: 13 : HDMI 1.3 / 12 : HDMI 1.2
- Product: L : LCD-TV / P : PDP-TV

In case Failure occurs!
ex) L13_1366_768 FAILURE_A1_H1_H2_H3_H4

Write Failed one.
Above shows all from analog , HDMI1~HDMI4 are failed.

As L450 and lower groups support only HDMI 1.2 version, only 1.2 version can be displayed.
L550 and more groups support HDMI 1.3 version & 1.2 version. So, 1.3 version can be displayed in factory outgoing condition.…In case HDMI_1 Port changes into HDMI 1.2 version due to service request, HDMI 1.2 version can be displayed. However, be aware other Ports are HDMI 1.3 version.
Before change : L13_1366_768 SUCCESS ⟶ After change : L12_1366_768 SUCCESS

2. In case of entering Option Table(Service): Check Panel Inch & Model Option list in ATV-Micom, and decide HDMI Port qty that needs self write.

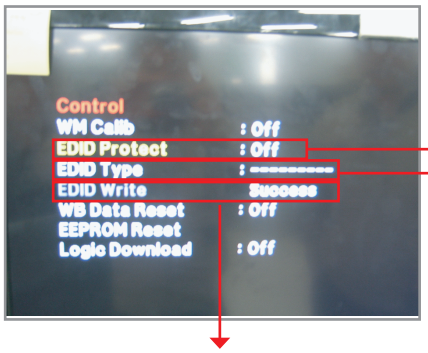


Panel Inch : 40"
Model Option : Tanzanite

*All project names that will be introduced in 2008 mentioned.
*All inches that will be introduced in 2008 mentioned.

LCD-TV	Model Option	Panel Inch
LCD-TV	Coral Tanzanite Jade	22",26",32",37",40"
	Pearl M.Stone Amber	32",37",40",46",52"
PDP-TV	Carnelian Pyrope Pyrope 3D	42",50"
	Spinel	50"

3. OSD in case of entering Control : Start detailed setting work to Self write.



① EDID Protect : Off

Off→ Self write possible : In order for ddc data to be written, set each EEPROM Write Protection Pin as Low.
On→ Self write impossible : In order for ddc data not to be written, set each EEPROM Write Protection Pin as High.

② EDID Type : ------

HDMI Version & Panel highest resolution is displayed at the same time with EDID combination version grouping condition showen.

③ EDID Write : Success

Under the condition that EDID Protect is Off & EDID Type is selected,
When doing EDID Write, dddc data is written in each EEPROM.
If All Port does writing, Success will be displayed.
If even one port is failed, Failure will be displayed.

In case of SUCCESS!
ex) L13_1366_768 SUCCESS

In case of SUCCESS!
It should be displayed that which one is failed among Analog , HDMI1 , HDMI2 ,HDMI3 , HDMI4 Below shows all of Analog , HDMI1~HDMI4 are failed.
ex) L13_1366_768 FAILURE_A1_H1_H2_H3_H4

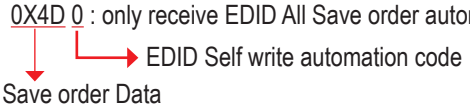
② EDID Type : ------

Product	Project	HDMI Version & Resolution	
LCD-TV Europe	Pearl Amber M.Stone	L13_1920_1080 L12_1920_1080	→ Market svc use
	Coral Tanzanite Jade	L12_1680_1050 L12_1366_768	→ Panel Inch : If 26"~40" is set, L12_1366_768 will be selected automatically. → Panel Inch : If 22" is set, L12_1680_1050 will be selected automatically.
	Not confirmed		
PDP-TV Europe	Carnelian Pyrope Pyrope 3D	P12_1360_768 P12_1024_768	→ Panel Inch : If 50" is set, P12_1360_768 will be selected automatically. → Panel Inch : I 42" is set, P12_1024_768 will be selected automatically.
	Spinel	P13_1920_1080 P12_1920_1080	→ Market svc use
	Not confirmed		→ Market svc use

When grouping EDID combination version in SW group, check list.

ex)
Pearl HDMI Port qty is three.
For factory outgoing condition, it selects HDMI Version 1.3, and self writes. Then, HDMI 1.3 Version will be displayed in all HDMI 3 Ports with outgoing.
For market service condition, it selects HDMI Version 1.2, and self writes. Then, 1.2 will be displayed in HDMI_1Port.
Be aware that HDMI2~4 Ports is 1.3.

4. In case of Self write by receiving automation code



Under the condition that Panel Inch & Model Option are set, automation code is received, and Self write is done!
ex) Pearl
Factory entering OSD picture → L13_1920_1080 SUCCESS
Control entering OSD picture → EDID Protect : On
EDID Type : L13_1920_1080
EDID Write : L13_1920_1080 SUCCESS

OSD should be displayed like above.

5. In case Self write is done with Manual due to service request (it changes HDMI 1.3 Version into HDMI 1.2 Version; L550, P550 and more)

   Under the condition that Panel Inch & Model Option are set, in case of retouching manually !
   ex) Pearl (model using HDMI 3)

   ▶ Before Retuch
   Factory entering OSD picture → L13_1920_1080 SUCCESS
   ← At a time of factory outgoing, HDMI 3 did self wirte with 1.3version.
   Control entering OSD picture → EDID Protect : On
   EDID Type : L13_1920_1080
   At a time of factory outgoing, HDMI 3 was selected with 1.3version to self write.
   EDID Write : L13_1920_1080 SUCCESS
   At a time of factory outgoing, HDMI 3 did self wirte with 1.3version.
   ▶ After Retuch
   Factory entering OSD picture → L12_1920_1080 SUCCESS
   ← Service engineer did self write with 1.3→ 1.2 version of HDMI_1Port among HDMI 3
   L12_1920_1080 SUCCESS
   Control entering OSD picture → EDID Protect : On
   EDID Type : L13_1920_1080
   Service engineer is possible to select EDID Type to changeHDMI_1Port HDMI
   Version from L13_1920_1080 → to L12_1920_1080.
   After selecting L12_1920_1080, EDID Write should be done. After EDID Write,
   EDID Type will keep L13_1920_1080 that's factory outgoing condition.
   EDID Write : L12_1920_1080 SUCCESS
   Service engineer did self write with 1.3→ 1.2 version of HDMI_1Port among
   HDMI 3. However, HDMI_2 , HDMI_3Port was self written with 1.3version.

MEMO